

**REMARKS**

New claims 29 and 30 are currently being added. Basis for claims 29 and 30 can be found on page 3, lines 5-6, in Applicant's specification.

These amendments do not introduce new matter within the meaning of 35 U.S.C. §132. Accordingly, entry of the amendments prior to examination is respectfully requested

**1. Rejection of Claims 1-13 and 15-18 Under 35 U.S.C. §102(b)**

The Office Action states,

Goeke et al. disclose a catalyst comprising (A) a precursor in the formula of  $Mg_mTi_1(OR)_nX_p[ED]_q$  and (B) an activator having the formula of  $Al(R'')_cX'_dH_e$ ; wherein the precursor is the contact product of a titanium compound  $[Ti(OR)_aX_b]$ , a magnesium compound  $[MgX_2]$ , and an electron donor, wherein  $Mg/Ti$  = about 0.5-56 (preferably about 1 to 10) and electron donor/ $Ti$  = about 2-85 (preferably about 3 to 10) (page 12-14; claim 1). Goeke et al. further disclose that the electron donor is alkyl esters of aliphatic and aromatic carboxylic acids, aliphatic ethers, cyclic ethers, and aliphatic ketones - tetrahydrofuran and ethyl acetate being exemplified; the activator is  $Al(C_2H_5)_3$ ,  $Al(C_2H_5)_2Cl$ ,  $Al(i-C_4H_9)_3$ ,  $Al(C_6H_{13})_3$ ,  $Al(C_8H_{17})_3$ , or mixtures thereof (page 14, lines 1-11 and 27-31; claim 1). Thus, the present claims are anticipated by the disclosure of Goeke et al.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 1-13 and 15-18.

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for

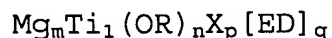
anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The **identical** invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), (Emphasis added). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

As outlined in Applicant's response of July 25, 2007, Applicant respectfully believes EP 0 004 647 A2 (referred to herein as Goeke, et al.) fails to disclose, teach, or suggest Applicant's currently claimed solid catalyst component for the polymerization of olefins comprising Mg, a titanium compound selected from titanium tetrahalides or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, a halogen, and an electron donor compound (ED) selected from ethers, esters, amines, ketones, or nitriles, wherein a molar ratio Mg/Ti is higher than 5, and a molar ratio ED/Ti is higher than 3.5.

In particular, Applicant believes Goeke, et al. fails to disclose, teach, or suggest solid catalyst components comprising a titanium compound selected from titanium tetrahalides, or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, and wherein **a molar ratio Mg/Ti is higher than 5**, and a molar ratio ED/Ti is higher than 3.5. See MPEP §2131.

In fact, as outlined in Applicant's previous response of July 25, 2007, Goeke, et al. discloses on page 16, lines 25-30,

When thus made as disclosed above the precursor composition has the formula



wherein ED is the electron donor compound,  
**m is  $\geq 0.5$  to  $\leq 56$ , and preferably  $\geq 1.5$  to  $\leq 5$ , . . . .**  
. (Emphasis added)

However, in order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." See MPEP 2131.03, section II. Additionally, the **identical** invention must be shown in as **complete detail** as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), (Emphasis added). The reference must "sufficiently describe the claimed invention to have placed the public in possession of it." *Minnesota Mining & Mfg. Co. ("3M") v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1572, 24 U.S.P.Q.2d 1321, 1332 (Fed. Cir. 1992). Accordingly, Applicant respectfully believes the extremely broad and generic Mg/Ti ratio disclosed in Goeke, et al. does not anticipate Applicant's currently claimed Mg/Ti ratio of higher than 5.

Notwithstanding, Applicant has reproduced Example 1a in Goeke, et al. to demonstrate Applicant's currently claimed solid catalyst components unexpectedly comprise a higher activity. In particular, as outlined in Applicant's declaration under 37 C.F.R. §1.132, which

is submitted herein as ATTACHMENT B, Applicant's currently claimed solid catalyst components unexpectedly comprise an activity **more than 15 times greater** than those of Goeke, et al. Additionally, section 2131.03 II of the MPEP states, in part,

When the prior art discloses a range which touches or overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with 'sufficient specificity to constitute an anticipation under the statute.' What constitutes a 'sufficient specificity' is fact dependent. If the claims are directed to a narrow range, and the reference teaches a broad range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with 'sufficient specificity' to constitute an anticipation of the claims. See, e.g., *Atofina v. Great Lakes Chem. Corp.*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006).

\*\*\*\*\*

**Any evidence of unexpected results within the narrow range may also render the claims unobvious.** The question of 'sufficient specificity' is similar to that of 'clearly envisaging' a species from a generic teaching. See MPEP § 2131.02. A 35 U.S.C. 102/ 103 combination rejection is permitted if it is unclear if the reference teaches the range with 'sufficient specificity.' The examiner must, in this case, provide reasons for anticipation as well as a reasoned statement regarding obviousness. *Ex parte Lee*, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993) (expanded Board). (Emphasis added)

Accordingly, not only does Applicant respectfully believe Goeke, et al. does not disclose, teach, or suggest Applicant's currently claimed solid catalyst components with sufficient specificity to constitute an anticipation under the statute as

required by 35 U.S.C. §102, Applicant respectfully believes the unexpectedly higher activity of Applicant's currently claimed catalyst components also render the claimed catalyst components unobvious in view of Goeke, et al.

In light of the above, claims 1-13 and 15-30 are therefore believed to be patentable over Goeke, et al. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

## **2. Rejection of Claims 25-27 Under 35 U.S.C. §102(b)**

The Office Action states that claims 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Goeke, et al. (EP 0 004 647 A2). In particular, the Office Action states,

Goeke et al. disclose a process to form a copolymer of ethylene and a comonomer in gas phase in the presence of catalyst which comprises (A) a precursor in the formula of  $Mg_mTi_1(OR)_nX_p[ED]_q$  and (B) an activator having the formula of  $Al(R'')_cX'_dHe$ ; wherein the precursor is the contact product of a titanium compound  $[Ti(OR)_aX_b]$ , a magnesium compound  $[MgX_2]$ , and an electron donor -  $Mg/Ti$  = about 0.5-56 (preferably about 1 to 10) and electron donor/Ti = about 2-85 (preferably about 3 to 10); the electron donor is alkyl esters of aliphatic and aromatic carboxylic acids, aliphatic ethers, cyclic ethers, and aliphatic ketones - tetrahydrofuran and ethyl acetate being exemplified; the activator is  $Al(C_2H_5)_3$ ,  $Al(C_2H_5)_2Cl$ ,  $Al(i-C_4H_9)_3$ ,  $Al(C_6H_{13})_3$ ,  $Al(C_8H_{17})_3$ , or mixtures thereof; the comonomer is  $C_{3-8}$  comonomer in an amount of at least 1 to 10 mol % (page 12-14 - especially page 14, lines 1-11 and 27-31; page 19, lines 31-37; page 20, lines 1-30; claim 1). Thus, the present claims are anticipated by the disclosure of Goeke et al.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 25-27.

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The **identical** invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), (Emphasis added). The elements must also be arranged as required by the claim. *In re Bond*, 15 USPQ2d 1566 (Fed. Cir. 1990).

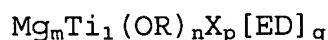
As outlined in Applicant's response of July 25, 2007, Applicant respectfully believes EP 0 004 647 A2 (referred to herein as Goeke, et al.) fails to disclose, teach, or suggest Applicant's currently claimed solid catalyst component for the polymerization of olefins comprising Mg, a titanium compound selected from titanium tetrahalides or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, a halogen, and an electron donor compound (ED) selected from ethers, esters, amines, ketones, or nitriles, wherein a molar ratio Mg/Ti is higher than 5, and a molar ratio ED/Ti is higher than 3.5.

In particular, Applicant believes Goeke, et al. fails to

disclose, teach, or suggest solid catalyst components comprising a titanium compound selected from titanium tetrahalides, or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, and wherein **a molar ratio Mg/Ti is higher than 5**, and a molar ratio ED/Ti is higher than 3.5. See MPEP §2131.

In fact, as outlined in Applicant's previous response of July 25, 2007, Goeke, et al. discloses on page 16, lines 25-30,

When thus made as disclosed above the precursor composition has the formula



wherein ED is the electron donor compound,  
**m is  $\geq 0.5$  to  $\leq 56$ , and preferably  $\geq 1.5$  to  $\leq 5$ , . . . .**  
. (Emphasis added)

However, in order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." See MPEP 2131.03, section II. Additionally, the **identical** invention must be shown in as **complete detail** as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), (Emphasis added). The reference must "sufficiently describe the claimed invention to have placed the public in possession of it." *Minnesota Mining & Mfg. Co. ("3M") v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1572, 24 U.S.P.Q.2d 1321, 1332 (Fed. Cir. 1992). Accordingly, Applicant respectfully believes the extremely broad and generic Mg/Ti ratio disclosed in Goeke, et al.

does not anticipate Applicant's currently claimed Mg/Ti ratio of higher than 5.

Notwithstanding, Applicant has reproduced Example 1a in Goeke, et al. to demonstrate Applicant's currently claimed solid catalyst components unexpectedly comprise a higher activity. In particular, as outlined in Applicant's declaration under 37 C.F.R. §1.132, which is submitted herein as ATTACHMENT B, Applicant's currently claimed solid catalyst components unexpectedly comprise an activity **more than 15 times greater** than those of Goeke, et al. Additionally, section 2131.03 II of the MPEP states, in part,

When the prior art discloses a range which touches or overlaps the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with 'sufficient specificity to constitute an anticipation under the statute.' What constitutes a 'sufficient specificity' is fact dependent. If the claims are directed to a narrow range, and the reference teaches a broad range, depending on the other facts of the case, it may be reasonable to conclude that the narrow range is not disclosed with 'sufficient specificity' to constitute an anticipation of the claims. See, e.g., *Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006).

\*\*\*\*\*

**Any evidence of unexpected results within the narrow range may also render the claims unobvious.** The question of 'sufficient specificity' is similar to that of 'clearly envisaging' a species from a generic teaching. See MPEP § 2131.02. A 35 U.S.C. 102/ 103 combination rejection is permitted if it is unclear if the reference teaches the range with 'sufficient specificity.' The examiner must, in this case, provide reasons for anticipation as well as a reasoned statement regarding



obviousness. *Ex parte Lee*, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993) (expanded Board). (Emphasis added)

Accordingly, not only does Applicant respectfully believe Goeke, et al. does not disclose, teach, or suggest Applicant's currently claimed solid catalyst components with sufficient specificity to constitute an anticipation under the statute as required by 35 U.S.C. §102, Applicant respectfully believes the unexpectedly higher activity of Applicant's currently claimed catalyst components also render the claimed catalyst components unobvious in view of Goeke, et al.

In light of the above, claims 1-13 and 15-30 are therefore believed to be patentable over Goeke, et al. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

### **3. Rejection of Claims 19-20 Under 35 U.S.C. §103(a)**

The Office Action states that claims 19-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Goeke, et al. (EP 0 004 647 A2) in view of Govoni, et al. (WO 93/03078). In particular, the Office Action states,

The disclosure of Goeke et al. is set forth in paragraph 4 and is incorporated herein by reference.

The difference between the present claims and the disclosure of Goeke et al. is the requirement of an external electron donor which is an aliphatic ether or tetrahydrofuran to be used in the present invention.

Govoni et al. disclose a catalyst comprising (A) a solid

component comprising a titanium compound containing at least one titanium-halogen bond supported on a magnesium halide in active form and an internal donor, (B) an alkyl aluminum compound, and optionally (C) an external donor which is the same or different type with respect to the internal donor (pages 6-7). Govoni et al. further disclose that '[t]he external donor is used to confer to the catalyst the required high stereospecificity. However, when particular diethers are employed as internal donors, the catalyst stereospecificity is sufficiently high and no external donor is required' (page 7, lines 15-20). In other words, if the internal electron donor is not diether, an external electron donor is required to obtain the high stereospecificity [motivation]. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use tetrahydrofuran as the external electron donor in the disclosure of Goeke et al. to obtain the high stereospecificity and thereby obtain the present invention.

#### RESPONSE

Applicant respectfully traverses the rejection of claims 19-20.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation

of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments *supra* regarding Goeke, et al. are incorporated herein by reference in their entirety. Additionally, Applicant respectfully believes Govoni, et al. does not remedy the deficiencies of Goeke, et al.

As discussed *supra*, Applicant respectfully believes EP 0 004 647 A2 (referred to herein as Goeke, et al.) fails to disclose, teach, or suggest Applicant's currently claimed solid catalyst component for the polymerization of olefins comprising Mg, a titanium compound selected from titanium tetrahalides or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, a halogen, and an electron donor compound (ED) selected from ethers, esters, amines, ketones, or nitriles, wherein a molar ratio Mg/Ti is higher than 5, and a molar ratio ED/Ti is higher than 3.5.

In particular, as outlined *supra*, Applicant has reproduced Example 1a in Goeke, et al. to demonstrate Applicant's currently claimed solid catalyst components unexpectedly comprise a higher activity. See Applicant's declaration under 37 C.F.R. §1.132, which is submitted herein as ATTACHMENT B. As illustrated in Applicant's declaration, Applicant's currently claimed solid catalyst components unexpectedly comprise an activity **more than 15 times greater** than those of Goeke, et al.

Additionally, Applicant respectfully believes Govoni, et al.

fails to remedy the deficiencies of Goeke, et al.

In particular, as outlined *supra*, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. See MPEP §2142.

Accordingly, given the aforementioned differences between Goeke, et al., along with the differences acknowledged by the Examiner on page 6, lines 5-7, and along with the fact that Govoni, et al. fails to remedy these deficiencies, Applicant respectfully believes the Examiner has not established a *prima facie* case of obviousness, and that currently pending claims 19-20 are patentably distinct over Goeke, et al. in view of Govoni, et al. Additionally, Applicant respectfully believes the unexpectedly higher activity of Applicant's currently claimed catalyst components render the claimed catalyst components unobvious over Goeke, et al. in view of Govoni, et al.

In light of the above, claim 1-13 and 15-30 are therefore believed to be patentable over Goeke, et al. in view of Govoni, et al. As such, reconsideration and withdrawal of the rejection is respectfully requested.

**4. Rejection of Claim 21 Under 35 U.S.C. §103(a)**

The Office Action states that claim 21 is rejected under 35 U.S.C. §103(a) as being unpatentable over Goeke, et al. (EP 0 004 647 A2) in view of Govoni, et al. (WO 93/03078). In particular, the Office Action states,

The disclosure of Goeke et al. is set forth in paragraph 4 and is incorporated herein by reference.

The difference between the present claim and the disclosure of Goeke et al. is the requirement of the external electron donor to be a specific silicon compound.

Govoni et al. disclose a catalyst comprising (A) a solid component comprising a titanium compound containing at least one titanium-halogen bond supported on a magnesium halide in active form and an internal donor, (B) an alkyl aluminum compound, and optionally (C) an external donor which is the same or different type with respect to the internal donor (pages 6-7). Govoni et al. further disclose that '[w]hen the internal donor is an ester. . . . the external donor is preferably selected from the silicon compounds of the formula  $R_1R_2Si(OR)_2$ . . . .' to obtain the high spereospecificity [motivation] (page 7, lines 15-16; page 6, lines 13-16). In light of such benefit, it would have been obvious to use the specific silicon compound in the disclosure of Goeke et al. to obtain the high stereospecificity and thereby obtain the present invention.

**RESPONSE**

Applicant respectfully traverses the rejection of claim 21.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at

issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments *supra* regarding Goeke, et al. are incorporated herein by reference in their entirety. Additionally, Applicant respectfully believes Govoni, et al. does not remedy the deficiencies of Goeke, et al.

As discussed *supra*, Applicant respectfully believes EP 0 004 647 A2 (referred to herein as Goeke, et al.) fails to disclose, teach, or suggest Applicant's currently claimed solid catalyst component for the polymerization of olefins comprising Mg, a titanium compound selected from titanium tetrahalides or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, a halogen, and an electron donor compound (ED) selected from ethers, esters, amines, ketones, or nitriles, wherein a molar ratio Mg/Ti is higher than 5, and a molar ratio ED/Ti is higher than 3.5.

In particular, as outlined *supra*, Applicant has reproduced

Example 1a in Goeke, et al. to demonstrate Applicant's currently claimed solid catalyst components unexpectedly comprise a higher activity. See Applicant's declaration under 37 C.F.R. §1.132, which is submitted herein as ATTACHMENT B. As illustrated in Applicant's declaration, Applicant's currently claimed solid catalyst components unexpectedly comprise an activity **more than 15 times greater** than those of Goeke, et al.

Additionally, Applicant respectfully believes Govoni, et al. fails to remedy the deficiencies of Goeke, et al.

In particular, as outlined *supra*, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. See MPEP §2142.

Accordingly, given the aforementioned differences between Goeke, et al., along with the differences acknowledged by the Examiner on page 7, lines 4-5, and along with the fact that Govoni, et al. fails to remedy these deficiencies, Applicant respectfully believes the Examiner has not established a *prima facie* case of obviousness, and that currently pending claims 19-20 are patentably distinct over Goeke, et al. in view of Govoni, et al. Additionally, Applicant respectfully believes the unexpectedly higher activity of

Applicant's currently claimed catalyst components render the claimed catalyst components unobvious over Goeke, et al. in view of Govoni, et al.

In light of the above, claim 1-13 and 15-30 are therefore believed to be patentable over Goeke, et al. in view of Govoni, et al. As such, reconsideration and withdrawal of the rejection is respectfully requested.

**11. Rejection of Claims 22-24 and 28 Under 35 U.S.C. §103(a)**

The Office Action states that claims 22-24 and 28 are rejected under 35 U.S.C. §103(a) as being unpatentable over Goeke, et al. (EP 0 004 647 A2) in view of Govoni, et al. (WO 93/03078). In particular, the Office Action states,

The disclosure of Goeke et al. is set forth in paragraph 4 and is incorporated herein by reference.

The difference between the present claim and the disclosure of Goeke et al. is the requirement of the catalyst to be pre-polymerized to have the specific amount of the polymer.

Govoni et al. disclose a catalyst comprising (A) a solid component comprising a titanium compound containing at least one titanium-halogen bond supported on a magnesium halide in active form and an internal donor, (B) an alkyl aluminum compound, and optionally (C) an external donor which is the same or different type with respect to the internal donor (pages 6-7). Govoni et al. further disclose that the catalyst is undergone pre-polymerization treatment with ethylene and/or alpha-olefin to obtain a prepolymerized catalyst having polymer in an amount from about 1 to about 1,000 g polymer per g of the catalyst (page 25, lines 17-24). The pre-polymerization treatment 'allow to control the polymerization process in the gas phase without the drawbacks. . . . which are essentially due to the low heat transfer capability of the gas phase and to the formation of electrostatic charges, which



determine the tendency of the catalyst and the polymer particles to adhere to the reactor walls' [motivation] (page 6, lines 7-13). In light of such benefit, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use pre-polymerized catalyst in the disclosure of Goeke et al. to avoid fouling and thereby obtain the present invention.

### RESPONSE

Applicant respectfully traverses the rejection of claims 22-24, and 28.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

Arguments *supra* regarding Goeke, et al. are incorporated herein by reference in their entirety. Additionally, Applicant

respectfully believes Govoni, et al. does not remedy the deficiencies of Goeke, et al.

As discussed *supra*, Applicant respectfully believes EP 0 004 647 A2 (referred to herein as Goeke, et al.) fails to disclose, teach, or suggest Applicant's currently claimed solid catalyst component for the polymerization of olefins comprising Mg, a titanium compound selected from titanium tetrahalides or of formula  $TiX_n(OR^1)_{4-n}$ , wherein  $0 \leq n \leq 3$ , X is halogen, and  $R^1$  is  $C_1$ - $C_{10}$  hydrocarbon group, a halogen, and an electron donor compound (ED) selected from ethers, esters, amines, ketones, or nitriles, wherein a molar ratio Mg/Ti is higher than 5, and a molar ratio ED/Ti is higher than 3.5.

In particular, as outlined *supra*, Applicant has reproduced Example 1a in Goeke, et al. to demonstrate Applicant's currently claimed solid catalyst components unexpectedly comprise a higher activity. See Applicant's declaration under 37 C.F.R. §1.132, which is submitted herein as ATTACHMENT B. As illustrated in Applicant's declaration, Applicant's currently claimed solid catalyst components unexpectedly comprise an activity **more than 15 times greater** than those of Goeke, et al.

Additionally, Applicant respectfully believes Govoni, et al. fails to remedy the deficiencies of Goeke, et al.

In particular, as outlined *supra*, to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one or

ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. See MPEP §2142.

Accordingly, given the aforementioned differences between Goeke, et al., along with the differences acknowledged by the Examiner on page 7, line 20 - page 8, line 1, and along with the fact that Govoni, et al. fails to remedy these deficiencies, Applicant respectfully believes the Examiner has not established a *prima facie* case of obviousness, and that currently pending claims 19-20 are patentably distinct over Goeke, et al. in view of Govoni, et al. Additionally, Applicant respectfully believes the unexpectedly higher activity of Applicant's currently claimed catalyst components render the claimed catalyst components unobvious over Goeke, et al. in view of Govoni, et al.

In light of the above, claim 1-13 and 15-30 are therefore believed to be patentable over Goeke, et al. in view of Govoni, et al. As such, reconsideration and withdrawal of the rejection is respectfully requested.

#### CONCLUSION

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the references of record. The Examiner is therefore respectfully requested to reconsider and withdraw all rejections, and allow all

Serial No. 10/537,077

pending claims 1-13 and 15-30. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

The Examiner is welcomed to telephone the undersigned practitioner with any questions or comments.

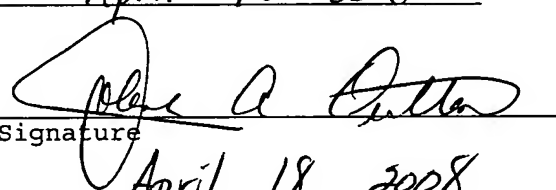
Respectfully submitted,

By: 

Jarrod N. Raphael  
Registration No. 55,566  
Customer No. 34872

Date: April 17, 2008  
Delaware Corporate Center II  
2 Righter Parkway, Suite 300  
Wilmington, Delaware 19803  
Telephone No.: 302-683-8176  
Fax No.: 302-731-6408

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop  
AF Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on

April 18 2008  
  
Signature  
April 18 2008  
Date